



## **Monkeypox Infections In Animals: Interim Guidance for Veterinarians and Pet Owners**

The Centers for Disease Control and Prevention (CDC) has been working closely with state and local health department and other partners to investigate cases of monkeypox virus infections among humans who had direct or close contact with recently purchased ill prairie dogs, a Gambian rat, and a rabbit that was housed in a veterinary clinic with an ill prairie dog. As of June 7, at least six persons with probable monkeypox infection have been reported to be veterinarians or staff at veterinary hospitals.

Human monkeypox is a rare zoonotic viral disease that occurs primarily in the rain forest countries of central and west Africa. In humans, the illness produces a vesicular and pustular rash similar to that of smallpox. The incubation period from exposure to fever onset is about 12 days. In humans, case-fatality ratios in Africa have ranged from 1% to 10% (for additional information about monkeypox, see [www.cdc.gov/ncidod/eid/vol7no3/hutin.htm](http://www.cdc.gov/ncidod/eid/vol7no3/hutin.htm)).

These interim guidelines will be updated as new information becomes available and after consultation with additional public health partners.

### **Manifestations of Monkeypox in Animals**

In the current outbreak, illness in animals has been reported to include fever, cough, blepharoconjunctivitis, lymphadenopathy, followed by a nodular rash. Some animals have died while others reportedly recovered. The types of animals that may become ill with monkeypox are currently unknown; as a precaution, all mammals should be considered susceptible at this time.

### **Recommendations for Pet Owners with Ill Animals**

Pet owners who suspect their animal may have an illness compatible with monkeypox should immediately isolate the animal from humans and other animals and contact their state or local health department. In most cases, evaluation by a veterinarian will be recommended. Owners should notify the veterinarian before transporting the animal to the clinic so that appropriate infection control precautions can be implemented prior to arrival.

Owners should consider wearing a mask and gloves when handling the animal. The animal's bedding should be collected and bagged and brought with the animal to the veterinary clinic for disposal as medically regulated waste. Soiled bedding should **not** be disposed of as household trash. Following identification of an animal with suspect monkeypox in a household, any animals (including dogs and cats) who may have come in contact with the sick animal should be closely observed for signs of illness for a period of one month following the last date of exposure. Contaminated household surfaces should be cleaned and disinfected. Standard household cleaning/disinfectants may be used in accordance with manufacturer's instructions.

### **Transport of Ill Animals**

Transport of the ill animal to a veterinary clinic should be done by a single individual to limit unnecessary exposure. At the time of animal transport, the owner should also transport the sick animal's bagged

## **Monkeypox Infections In Animals: Interim Guidance for Veterinarians and Pet Owners**

(continued from previous page)

bedding for disposal. Care should be taken to minimize driver exposure during transport. During transport animals should be confined in a closed container such as a cardboard box. If available, the animal should be confined in a separate compartment of the vehicle, such as the bed of a pickup truck. Following transport, the area of the vehicle where the animal was confined should be cleaned and disinfected. Standard household cleaning/disinfectants may be used in accordance with the manufacturer's instructions.

### **Evaluation and Reporting of Animals with Suspect Monkeypox**

Veterinarians examining sick prairie dogs or Gambian giant rats, or other mammals that may have come in contact with a suspected monkeypox case, should consider the diagnosis of monkeypox infection. Animals that currently appear healthy but have been implicated as a probable source of infection for a human case should also be treated as a suspected case of monkeypox. All suspected cases of monkeypox in animals should be reported immediately to state or local health department officials.

### **Infection Control Precautions**

Veterinarians who have been notified of an arriving animal with suspected monkeypox should admit the animal through a separate entrance to a private room and place it in isolation; the animal should not be admitted to an open waiting room.

When examining or euthanizing sick rodents, lagomorphs, and exotic pets, especially prairie dogs, Gambian giant rats or any ill mammal known to have been in contact with a case of monkeypox, the following precautions should be used:

1. Hand hygiene after all contact with a sick animal and contaminated surfaces.
2. Use of gown and gloves for any contact with the sick animal and contaminated surfaces.
3. Eye protection (e.g. goggles or face shield) if splash or spray of body fluids is likely.
4. Respiratory protection including a NIOSH-certified N95 filtering disposable respirator for entering the exam room.<sup>1</sup> If N95 respirators are not available for health-care personnel, then surgical masks should be worn.
5. Contain and dispose of contaminated waste in accordance with facility-specific guidelines for medically regulated infectious waste.
6. Handle used patient-care equipment in a manner that prevents contamination of skin and clothing. Ensure that used equipment has been cleaned and reprocessed appropriately.
7. Ensure that procedures are in place for cleaning and disinfecting contaminated environmental surfaces. Any EPA-registered hospital detergent-disinfectant currently used by health-care facilities for environmental sanitation may be used. Manufacturer's recommendations for dilution (i.e., concentration), contact time and care in handling should be followed.
8. Laundry (e.g., towels, clothing) may be washed in a standard washing machine with warm water and detergent; bleach may be added but is not necessary. Care should be used when handling soiled laundry to avoid direct contact with contaminated material. Soiled laundry should not be shaken or otherwise handled in a manner that may aerosolize infectious particles.

---

<sup>1</sup> Respirators should be used in the context of a complete respiratory protection program in accordance with OSHA regulations. This includes training and fit testing to ensure a proper seal between the respirator's sealing surface and the wearer's face. Detailed information on respirator programs, including fit test procedures can be accessed at [www.osha.gov/sltc/etools/respiratory](http://www.osha.gov/sltc/etools/respiratory). Where possible, a qualitative fit test should be conducted for N95 respirators; detailed information on fit testing can be accessed at [www.osha.gov/sltc/etools/respiratory/oshafiles/fittesting1.html](http://www.osha.gov/sltc/etools/respiratory/oshafiles/fittesting1.html).

## **Monkeypox Infections In Animals: Interim Guidance for Veterinarians and Pet Owners**

(continued from previous page)

### **Disposition of Animals with Suspected Monkeypox**

All animals with suspected monkeypox infection should be humanely euthanized to prevent further spread of the disease. Humane euthanasia options include pentobarbital injection or gas chamber using isoflurane or halothane for most animals. For small rodent species such as mice, cervical dislocation may be considered if performed by a trained person.

CDC is not currently recommending euthanasia of asymptomatic animals that may have been exposed to other infected animals. Exposed asymptomatic animals should be confined to the home and not allowed to come into contact with other animals. They should be observed for development of symptoms compatible with monkeypox for one month. Should such symptoms develop, the animal should then be evaluated and euthanized if indicated.

### **Submission of Specimens from Animals with Suspected Monkeypox**

Currently, CDC is not routinely requesting animal samples for testing. However, specimens can be collected and stored for possible future testing. Consultation with the state epidemiologist ([www.cste.org/members/state\\_and\\_territorial\\_epi.asp](http://www.cste.org/members/state_and_territorial_epi.asp)) and state health laboratory ([www.aphl.org/public\\_health\\_labs/index.cfm](http://www.aphl.org/public_health_labs/index.cfm)) is necessary for samples to be sent to CDC for testing.

Prior to euthanasia, whole blood in EDTA tubes or serum can be collected and refrigerated at 4°C. CDC is not recommending necropsies of animals except in Biosafety level three laboratories by persons recently vaccinated with vaccinia. Instead, the entire carcass may be preserved by freezing at -70°C, or submersing in 10% formalin and injecting the body cavity with as much formalin as it will hold.

### **Additional Information**

For more information contact your state or local health department or the CDC Emergency Operations Center 770-488-7100. Additional information and recommendations will be released as they become available. Updated information will be available at [www.cdc.gov/ncidod/monkeypox](http://www.cdc.gov/ncidod/monkeypox).

For more information, visit [www.cdc.gov/ncidod/monkeypox](http://www.cdc.gov/ncidod/monkeypox) or call the CDC public response hotline at (888) 246-2675 (English), (888) 246-2857 (Español), or (866) 874-2646 (TTY)

June 9, 2003

Page 3 of 3